

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1-25(cancelled).

26(new). A metal oxide/hydroxide material comprising precipitated metal oxide/hydroxide with a surface modified to facilitate accessibility of the surface to an external environment, said metal oxide/hydroxide material having a mesoporous area of greater than  $150 \text{ m}^2/\text{g}$ , or where the metal oxide/hydroxide is attached to, bound within, or otherwise associated with a substrate, the material has a mesoporous area of greater than  $800 \text{ m}^2/\text{g}$ , wherein said metal oxide/hydroxide is precipitated by treatment of a metal salt with base in an aqueous medium.

27(new). A metal oxide/hydroxide material according to claim 26 in the form of a composite in which the metal oxide/hydroxide is attached to, bound within, or otherwise associated with a substrate, said substrate having a surface modified to facilitate accessibility of the surface to an external environment.

28(new). A process for generating a metal oxide/hydroxide material with a surface modified to facilitate accessibility to an external environment comprising treating a metal salt with base in an aqueous medium under conditions sufficient to precipitate metal oxide/hydroxide in said aqueous medium, removing water from the aqueous medium by evaporation to provide a solid residue, and removing salt from the solid residue to thereby generate said metal oxide/hydroxide material with surface modified to facilitate accessibility to an external environment.

29(new). A process according to claim 28 wherein the metal

oxide/hydroxide material is a metal oxide material and wherein the water is removed from the aqueous medium by evaporation under conditions that convert any metal hydroxide to metal oxide.

30(new). A process according to claim 28 wherein the metal oxide/hydroxide material is a metal hydroxide material, and wherein the water is removed from the aqueous medium by evaporation under conditions that do not convert metal hydroxide to metal oxide.

31(new). A process according to claim 28 wherein metal oxide/hydroxide material is in the form of a composite in which the metal oxide/hydroxide is attached to, bound within, or otherwise associated with a substrate, and wherein the metal salt is treated with the base in the aqueous medium in the presence of the substrate.

32(new). A process according to claim 31 wherein the substrate has a surface modified to facilitate accessibility to an external environment.

33(new). A process according to claim 32 wherein the metal oxide/hydroxide is a metal oxide and wherein the water is removed from the aqueous medium by evaporation under conditions that convert any metal hydroxide to metal oxide.

34(new). A process according to claim 31 wherein the metal oxide/hydroxide is metal hydroxide, and wherein the water is removed from the aqueous medium by evaporation under conditions that do not convert the metal hydroxide to metal oxide.

35(new). A process according to claim 32 wherein the water is removed from the aqueous medium by evaporation through the application of heat to the

aqueous medium.

36(new). A process according to claim 35 wherein the aqueous medium is heated to a temperature of from 100°C to 110°C.

37(new). A process according to claim 28 wherein the salt is removed by washing the solid residue with water.

38(new). A process according to claim 37 wherein the washed solid residue is dried.

39(new). A process according to claim 30 wherein the metal oxide/hydroxide material has a mesoporous area of greater than 100 m<sup>2</sup>/g.

40(new). A process according to claim 31 wherein the metal oxide/hydroxide material has a mesoporous area of greater than 500 m<sup>2</sup>/g.

41(new). A process according to claim 28 wherein the metal salt is selected from the group consisting of halides, acetyl acetonates, sulphides, sulphates, nitrates, nitrides, cyanides, carbides, silanes, alkoxysilanes, and acetates of transition metal elements and metal salts comprising halogen oxoanions, metal and transition metal oxoanions and organic oxoanions.

42(new). A process according to claim 28 wherein the metal salt is treated with an oxidizing agent to place the metal in a suitable oxidation state for oxide/hydroxide formation.

43(new). A process according to claims 32 wherein the metal salt is doped/mixed with one or more additional metals, metal salts, complexes or other

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chemical species to confer desirable properties on the metal oxide/hydroxide material.

44(new). A process according to claim 28 wherein the base is a strong inorganic base.

45(new). A process according to claim 44 wherein the base is selected from the group consisting of sodium hydroxide, potassium hydroxide and ammonium hydroxide.

46(new). A process according to claim 32 wherein the amount of base is chosen such that the final pH of the aqueous medium is in the range of 7.5 to 8.5.

47(new). A process for preparing a metal material having a surface modified to facilitate accessibility to an external environment comprising preparing a metal oxide/hydroxide material according to the process claim 28 and subjecting the metal oxide/hydroxide material to reducing conditions such that the metal oxide/hydroxide is reduced to the corresponding metal.

48(new). A method for removing toxic components from an environment comprising contacting the environment with a metal oxide/hydroxide material according to claim 26.

49(new). A method for catalysing a chemical reaction in a reaction medium comprising contacting the reaction medium with a metal oxide/hydroxide material according to claim 27.

50(new). A method of manufacturing a supercapacitor comprising incorporating into a plate of said supercapacitor a metal oxide/hydroxide material

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according to claim 28.